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Local Climate Change Policy in the United Kingdom and Germany*

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Abstract

For over a decade climate change has been considered one of the most significant political issues facing the international community. In order to address this challenge, attention needs to be focused not only at the international level of treaties and conventions, but also on how climate protection policy is taking shape at the local level. Germany and the UK have been leading countries for international action on climate change. However, the reductions in domestic emissions of greenhouse gas emissions achieved benefited in both countries from specific circumstances. This report details the national climate change policy, the structure of local governments, their competencies and powers, the institutionalisation of local climate change policy, the most important spheres of action and the different roles played by municipalities in local climate protection policy in both countries. Despite the formal differences in the system of local government in Germany and the UK, the spheres of action as well as the roles of municipalities in local climate protection show clear tendencies towards convergence. The challenges in addressing greenhouse gas emissions from the transport and planning sectors have meant that in both countries attention has focused on the energy sector as the primary arena for local policy and local action. At the same time new governance forms dominate the roles taken by local governments with respect to climate protection. The role taken by local governments in Germany is becoming more 'enabling', and hence like the UK. The convergence between the two countries can be explained by internal (national) as well as external (European) factors. First, it is evident that the constitutionally guaranteed autonomy of German municipalities has been reduced considerably by their decreasing and inadequate financial resources, while UK local authorities have the potential to gain more autonomy. Second, British municipalities are mandated by the national government to take local climate and energy policy more seriously. Therefore, they have caught up with German municipalities, which are engaged in climate protection policy only on a voluntary basis. Third, the increasing European integration has significant impacts on local climate protection policy. The liberalisation of the energy and transport markets changed the German situation so that it is more akin to the UK situation, where many services are no longer provided by the municipalities themselves. The increasing convergence of both countries in the area of local climate protection suggests that there is considerable scope for experimentation with new policy instruments and for cross-national learning at the local level between German and British municipalities.

Zusammenfassung

Seit mehr als zehn Jahren wird der Klimawandel als eine der wichtigsten politischen Herausforderungen betrachtet, mit denen sich die internationale Gemeinschaft konfrontiert sieht. Um diese meistern zu können, darf sich die Aufmerksamkeit nicht nur auf Verträge und Konventionen auf der internationalen Ebene beschränken, sondern muss sich auch auf die Umsetzung des Klimaschutzes auf der lokalen Ebene richten. Deutschland und Großbritannien sind im Bereich des Klimaschutzes international führende Nationen. Allerdings wurde die Reduktion der Treibhausgasemissionen in beiden Ländern durch die jeweiligen Rahmenbedingungen erheblich begünstigt. Der vorliegende Bericht beschäftigt sich mit der nationalen Klimaschutzpolitik, der Struktur der Kommunen, ihren Zuständigkeiten, der Institutionalisierung der lokalen Klimapolitik, den wichtigsten Handlungsbereichen sowie mit den unterschiedlichen Rollen der Kommunen im Bereich des Klimaschutzes in beiden Ländern. Trotz der formalen Differenzen zwischen den deutschen und den britischen Kommunen zeigen sich sowohl bei den Handlungsbereichen als auch bei der Rolle der Kommunen im lokalen Klimaschutz deutliche Tendenzen hin zur Konvergenz der beiden Länder. Die lokale Politik und das lokale Handeln konzentrieren sich in beiden Ländern primär auf den Energiesektor, während in den Handlungsbereichen Verkehr und Stadtplanung erhebliche Probleme bestehen, die Treibhausgasemissionen zu reduzieren. Gleichzeitig wird die lokale Klimapolitik in beiden Fällen durch neue Governance-Formen dominiert. Die deutschen Kommunen übernehmen mehr und mehr eine aktivierende („enabling“) Rolle und werden den britischen Kommunen damit immer ähnlicher. Erklären lässt sich die Konvergenz zwischen den beiden Ländern sowohl durch interne (nationale) als auch durch externe (europäische) Faktoren: Erstens zeigt sich, dass sich die in der Verfassung garantierte Autonomie der deutschen Kommunen durch ihre abnehmenden und nicht-adäquaten finanziellen Ressourcen beträchtlich reduziert hat, während die Autonomie der britischen Kommunen tendenziell zunimmt. Zweitens wurden die britischen Kommunen durch nationale Vorgaben dazu verpflichtet, sich im Bereich der lokalen Klima- und Energiepolitik stärker zu engagieren. Sie haben daher gegenüber den deutschen Kommunen, die Klimaschutz als freiwillige Aufgabe betreiben, aufgeholt. Drittens hat die zunehmende europäischen Integration gravierende Auswirkungen auf den kommunalen Klimaschutz. Durch die Liberalisierung der Energie- und Verkehrsmärkte hat sich die Lage in Deutschland stark verändert und an die britische Situation angeglichen, da die entsprechenden Dienstleistungen vielfach nicht mehr von den Kommunen selbst angeboten werden. Durch die zunehmende Konvergenz des lokalen Klimaschutzes in Deutschland und Großbritannien sind beträchliche Spielräume für Experimente mit neuen Politikinstrumenten und das Lernen zwischen deutschen und britischen Städten entstanden.

Contents

List of Abbreviations

BVPI.....Best Value Performance Indicators
BMU.....Bundesministerium fuer Umwelt, Naturschutz und Reaktorsicherheit
CCP-UK.....Councils for Climate Protection
CHP.....Combined Heat and Power
CHPA.....Combined Heat and Power Association
DETR.....Department of the Environment, Transport and the Regions
DIFU.....Deutsches Institut fuer Urbanistik
DoE.....Department of Environment
DTI.....Department of Trade and Industry
EMAS.....Eco-Management and Audit Scheme
EMRLGA.....East Midlands Regional Local Governments Association
EnEV.....Energieeinsparverordnung
EST.....Energy Saving Trust
FSC.....Forest Stewardship Council
GOEM.....Government Office East Midlands
HECA.....Home Energy Conservation Act
HMCE.....Her Majesty's Customs and Excise
ICLEI.....International Council for Local Environment Initiatives
IDeA.....Improvement and Development Agency
IPCC.....International Panel on Climate Change
LGA.....Local Government Association
MIV.....Motorisierter Individualverkehr
NGO.....Non-Governmental Organisation
ODPM.....Office of the Deputy Prime Minster
PPG.....Planning Policy Guide
RCEP.....Royal Commission on Environment and Pollution
RPG.....Regional Planning Guide
SCC.....Southampton City Council
SiREN.....Scenarios for the Integration of Renewables in a European Cities Network
SRU.....Rat von Sachverstaendigen fuer Umweltfragen
UNFCC.....United Nations Framework Convention on Climate Change
VAT.....Value Added Tax
VEP.....Verkehrsentwicklungsplan

1. Introduction[1]

For over a decade, global climate change has been considered one of the most important challenges facing the international community. Since the first report of the Intergovernmental Panel on Climate Change (IPCC) in 1990, scientific evidence that anthropogenic activities are affecting the climate system has continued to grow. Despite uncertainty as to the rate, impacts and nature of climate change, and whether direct links can be drawn between climatic events, trends in climate variables and predictions of climate change, the consensus has been that action needs to be taken. In response, nation-states have engaged in a process of negotiating international agreements through which climate change can be governed. The 1992 United Nations Framework Convention on Climate Change (UNFCCC) established norms concerning responsibilities for global climate protection and the voluntary target that all developed countries should seek to reduce emissions of greenhouse gases to 1990 level by 2000. The 1997 Kyoto Protocol stipulates a further, binding, emissions reduction target of 5% below 1990 levels in the period 2008-2012 for developed countries and economies in transition, though this is differentiated for individual nation-states. In addition, the Kyoto Protocol introduced various 'flexible mechanisms', or policy instruments, through which such targets could be achieved. Both Germany and the United Kingdom have been instrumental in the international negotiations, in promoting the proactive approach taken by the European Union. Individually, Germany provided strong support for the development of the Kyoto Protocol, while the UK has acted as a negotiator between the European Union and the United States and has been credited with brokering the initial agreement on the UNFCCC. However, despite the success obtained in bringing nation-states to the negotiating table, few countries have met their commitments under the UNFCCC and without the ratification of either the United States or Russia the Kyoto Protocol has yet to enter into force.[2]

Moreover, signing international agreements is only one dimension of the policy process surrounding climate protection. Greenhouse gas emissions emanate from different sectors — transport, housing, industry — and from the activities and decisions of individuals and organisations operating at local, regional, national

1 We gratefully acknowledge the support of the Anglo-German Foundation for this research project. Note that the views expressed in this report are those of the authors alone.

2 The Kyoto Protocol will enter into force only if at least 55 countries which are responsible for at least 55% of all greenhouse gas emissions ratify it. In April 2004, 122 countries had ratified the Protocol, but collectively they are responsible for only 44.2% of all greenhouse gas emissions.

and international levels. While focus has remained on the international level, we contend that it is as important to consider how climate protection is being addressed within and across different levels of government and governance operating in a multi-level system. In order to contribute to such an analysis, this research project has examined both the nature and capacity of local climate protection policy in the UK and Germany, and the role of transnational municipal networks in governing climate change. In this report, we focus on a comparative analysis of local climate protection in the UK and Germany. Despite the similar contexts with respect to climate change policy found in Germany and the UK, the significantly different systems of local government in each country suggest that differences in local capacity to address climate protection may be considerable, and that in each case different challenges will be predominant. Such a comparison therefore provides a means of examining the 'difference' that different forms of local government make in shaping local capacity for climate protection, and hence the likely success of different national climate change strategies. In addition, given that both countries are in the European Union, it is possible to assess the impacts and implications of processes of European Integration on local capacity for climate protection. In conducting this research project, background material from documentary and secondary sources has been analysed, and three case studies selected for in-depth analysis in the UK (Leicester, Kirklees and Southampton) and in Germany (Heidelberg, Munich and Frankfurt am Main). These case studies were selected as pioneers in the area of local climate protection and as members of more than one transnational municipal network concerned with climate protection. Given the pioneer status of the selected local authorities, it is important to remember that the challenges faced in other local authorities across both Germany and the UK are likely to be more considerable.

In the following sections, we detail (2) the national climate change policy in each country, (3) the structure of local government, the competencies and powers of local authorities and the ways in which climate policy has been institutionalised at the local level, (4) the spheres of action involved in local climate protection, and (5) the different roles played by municipalities in relation to these activities. We then consider the municipal capacity to act in relation to climate change (6), and conclude (7) that, despite the formal differences in the system of local government in Germany and the UK, the impacts of the German financial crises, EU liberalisation policy, and growing local competencies for climate-related policy in the UK, mean that both the nature of local climate change policy and the challenges faced

by municipal governments in both countries have more similarities than differences.

2. National climate change policy

The UK and Germany have both been leading advocates for international action on climate change, and have both met the UNFCCC target of reducing emissions of greenhouse gases to 1990 levels by 2000, while also being on course to exceed the targets agreed under the Kyoto Protocol. However, as this section shows, despite domestic climate change strategies and action plans, emissions reductions to date have primarily been gained through serendipitous events rather than concerted effort, and significant challenges remain for moving beyond these initial targets in the future.

2.1 National climate change policy in the UK

Political concerns for climate change in the UK can be traced back to the 1988 speech by then Prime Minister, Margaret Thatcher, to the Royal Society. The 1990 UK sustainable development strategy, *This Common Inheritance* (DoE 1990), includes a target of reducing carbon dioxide to 1990 levels by 2005. In the lead up to the 1992 United Nations Conference on Environment and Development in Rio, a more stringent target of meeting 1990 levels by 2000 was adopted, a target to which other members of the EC had already agreed (Wynne 1993), and which was to form the basis of the UNFCCC. Following the agreement of the UNFCCC, the UK launched its first national climate change strategy, entitled *Climate Change: the UK Programme* (DoE 1994). The emphasis at this stage was on promoting energy efficiency, and on voluntary actions, such as the *Making a Corporate Commitment* campaign for industry, and various schemes for promoting home energy conservation (O'Riordan and Rowbotham 1996; Collier 1997). In addition, some market instruments were introduced, ostensibly to address the issue of climate change. In 1994, VAT was introduced at 8% for domestic fuel and power, with the intention that it rise to 17.5% by 1995. However, it was met with vehement opposition, in particular by those who thought that the tax was regressive in that it would have a disproportionate affect on those on low incomes, and the proposed extension was dropped. In the same year, the rate of tax on transport fuel was increased by 10%, with the government proposing to continue increasing this tax year on year. Until 1999, increases to this 'fuel duty escalator' were made every year, however rising fuel costs led to 'fuel protests' among the haulage industry and the escalating rate

of tax was dropped. Despite the relatively minimal interventions made, the UK was one of few countries which met its target under the UNFCCC. However, this fortunate outcome was due not to policies specifically directed at protecting the climate, but as the side-effect of the privatisation of the electricity sector in the late 1980s and the subsequent 'dash for gas' — the investment in combined cycle gas power plants — which created wind-fall savings in emissions for the UK (Collier 1997; Eyre 2001; O'Riordan and Rowbotham 1996).

This safety net of emissions reductions gave the UK considerable flexibility in the lead up to Kyoto and subsequently during negotiations among the EU member states as to how the common reduction target set at Kyoto of 8% below 1990 levels by 2008-2012 would be shared. The UK agreed to a target of 12.5% below 1990 levels, and in 1998 the recently elected Labour Government committed itself to achieving a 20% reduction[3]. In line with the more proactive stance adopted, in 2000 the UK published a second version of *Climate Change: the UK Programme* (DETR 2000a). While considerable emphasis is still placed on voluntary measures for energy efficiency in the transport and domestic sectors, the strategy incorporates a new target for delivery of 10% of energy through renewable sources, doubling Combined Heat and Power (CHP) capacity and the Climate Change Levy. Introduced in 1999 and brought into force in April 2001, the Levy is on the non-domestic use of energy and after considerable negotiation with industry and local government, various rates of energy taxation have been agreed[4] (HMCE 1999). Some large energy users, such as the chemical and paper industries, are excluded from 80% of the tax, provided that they agree to, and meet, energy use reduction targets, in the form of Climate Change Agreements. In 2002, an Emissions Trading scheme was also launched in the UK, which currently has 31 participants undertaking reduction measures on a voluntary basis and is also open to those attempting to fulfil the conditions of their Climate Change Agreement.

However, despite the relatively strong commitment of the UK to climate protection policy, internationally and nationally, the Royal Commission for Environ-

3 In 2003, emissions of greenhouse gases were estimated as 14% below 1990 levels (DEFRA 2004a).

4 For the year 2001-2002, these rates were (p/kWh): electricity (not including new renewable and CHP schemes) 0.43; coal 0.15; natural gas 0.15; liquid petroleum gas 0.07. The levy is forecast to raise around £1 billion in 2001/02, all of which will be returned to business through a 0.3 percentage point cut in employers' National Insurance Contributions and £150m of additional support for energy efficiency measures (HMCE 1999).

ment and Pollution suggested in their report, *Energy — the Changing Climate* (RCEP 2000), that further action was needed. In line with their recommendation, the Energy White Paper, *Our Energy Future — Creating a Low Carbon Economy*, (DTI 2003) committed the UK to a long-term target of reducing emissions of greenhouse gases by 60% by 2050, and has provided a further means for the Government to reiterate its commitment to energy efficiency measures, renewable energy and CHP. Recently published as part of the implementation of the Energy White Paper, *Energy Efficiency — the Government's Plan for Action* (DEFRA 2004b) includes the extension of the Energy Efficiency Commitment (undertaken by utilities to achieve domestic savings), the improvement of the housing stock through the Decent Homes standard for social housing and through changes to the Building Regulations for new buildings and refurbished properties, the introduction of the EU emissions trading scheme as a complement to UK economic instruments, as well as the roles of advice and new technologies in achieving reductions in energy use. Significantly, and in line with the 1994 and 2000 climate change strategies, it is suggested that there is a central role for local and regional approaches to energy efficiency (DEFRA 2004b: 4; see also LGA 2004). The significance of municipal governments in relation to climate protection in the UK is discussed further below.

2.2 National climate change policy in Germany

In Germany, an ambitious greenhouse gas emissions reduction programme was introduced and a voluntary agreement was negotiated between government and industry as early as 1990.[5] The national emissions reduction target of 25% by 2005 was the highest adopted among the pioneering countries (the Nordic states plus Germany). With a decline of over 18% in greenhouse gas emissions in the 1990s (SRU 2002: 335), Germany became the most successful country with respect to the reduction of emissions. However, this positive development was due to economic decline and a different energy mix in the new *Laender* following German reunification. It must be noted that almost 50% of this reduction was owed to so-called 'wall-fall profits', i.e. the collapse of the East German economy after reunification accounted for a large part of the decrease in emissions, in particular by the mid-

5 On the development of German climate change policy, see for example Kern et al. (2004a); Schreurs (2003); Beuermann (2002: 100 ff.); Müller (1998); Ulbert (1997: 153 ff.).

1990s (Schleich et al. 2001: 364, 378; Monstadt 2003: 116). Greenhouse gas emissions in Germany have been on the increase again since the year 2000.[6]

The German Social Democratic Party (SPD) and the Greens stressed the national climate protection target to reduce emissions of greenhouse gases by 25% by 2005 (based on 1990 levels) in their coalition agreement of 1998. One move towards the fulfilment of this goal was the decision to launch a national climate protection programme in October 2000 (Bundesregierung 2000; Trittin 2000). During its first legislative term (1998 to 2002) the red-green coalition government initiated a number of successful energy policy projects. The main projects were the termination of nuclear energy (2001), the introduction of an eco-tax, and the Renewable Energy Sources Act *(Erneuerbare-Energien-Gesetz)*. The latter can be regarded as particularly successful. It has led to a boom in renewable energies on a scale not even anticipated by the government itself. The leading position of Germany in the area of renewable energy was underlined during the discussions at the World Summit in Johannesburg in 2002. At the summit, Germany presented itself as a driving force behind European environmental policy and received much international attention for its proposals in the area of renewable energy. Among other initiatives, Germany will sponsor an international conference on this issue in June 2004 in Bonn.[7]

Following its re-election in 2002, the SPD and Greens agreed to continue their efforts in the area of climate protection and to maintain Germany's pioneer position. There was mutual consent within the coalition with regard to the fact that environmentally harmful subsidies be subject to revision or removed altogether. Nevertheless, and despite vigorous critique, the coalition partners agreed to guarantee the continued funding of the hard coal mining sector up to 2010 (although this will go hand-in-hand with further restructuring of the sector and steadily decreasing federal subsidies).[8] Responding to the claims of NGOs and environmental experts, the new coalition agreement contains a commitment to a 40% reduction target for greenhouse gas emissions in the period between 1990 and 2020.

6 See EU-Nachrichten No. 7, (19.2.2004), p. 7; cf. Ziesing (2004).

7 For information on the preparation of the planned conference on renewable energies (renewables2004), see Umwelt (2/2004: 89 f.).

8 The subsidisation of coal is discussed by Schleich et al. (2001); Jänicke (2003); cf. SRU (2004: 11).

In Germany, most of the federal states *(Laender)* have opted to create their own climate protection or energy programs, although they are not obliged to do so. Apart from a few exceptions, most of these programs were developed between 2000 and 2002, around the same time as the national climate protection program. Some *Laender* (e.g. North Rhine-Westphalia, Berlin, Mecklenburg-West Pommerania) even adopted the same general goals as the national government. The national target to reduce greenhouse gas emissions by 25% by 2005 (based on 1990 levels) served as the basis for quantitative targets and measures in the climate protection programme of North Rhine-Westphalia (for details see Jörgensen 2002: 15 ff.). The German states have been particularly active in the support of renewable energies. In the 1990s, they provided 90% of financial support for renewable energy resources, in particular for wind power and thermal solar energy (Eichhammer et al. 2001: 18, 37). However, the states show remarkable differences regarding their activities in the area of local climate change policy (see Dünnhoff 2000),[9] as we discuss further below.

2.3 Summary

Both Germany and the UK have been leading advocates for climate protection policy, internationally and domestically. However, evidence that in either case emissions reductions are taking place over and above those which have accrued due to particular historical circumstances is limited.[10] In each case, increasing efforts are being put into achieving emissions reductions. At the same time, the role of regional and local governments in addressing climate protection is receiving attention in both countries, from the national government and from regional and local governments themselves. In part, this is due to the recognition that while climate change is a global issue, it is also a 'local' issue, given that emissions of greenhouse gases are produced, and can be prevented, in specific places. However, what can be achieved at the local level depends critically on the nature of central-local government relations, and local competencies for climate protection, and it is to this which we now turn.

9 It has been shown that Hesse, Schleswig-Holstein and North Rhine-Westphalia are best regarding their support of local energy management (e.g. by organising networks and working groups for local energy commissioners) (Dünnhoff 2000: 3).

10 Eichhammer et al. (2001: 38-39) state that emission reduction arising from special circumstances (unification effect in Germany and liberalisation effect in the UK) account for about 50% of the reduction for all Kyoto gases, and for about 60% of the reduction for energy-related CO_2 emissions in both countries.

3. Local government and climate change policy

Given their different histories and complexities, the competencies and powers of municipal governments in the UK and Germany differ significantly. This section outlines the framework conditions which shape municipal action on climate protection in the UK and in Germany, before introducing the specific local competencies and powers for climate protection, and considering how climate change policy is institutionalised at the local level.

3.1 Local government in the UK

Local authorities in the UK are directly elected bodies and have multiple roles covering areas such as education, health, regeneration, waste management, land-use planning and transport. The current structure of local authorities in the UK, including some 500 in England, Wales, and a further 32 in Scotland and 26 in Northern Ireland, is the outcome of the many rounds of reorganisation that have taken place during the last century. By the end of the nineteenth century, a tiered system of local authorities had been established in London and rural areas, with county councils overseeing district or borough councils, which were in turn made up of parish councils, while in large towns single local authorities had evolved. Reforms during the early 1970s introduced a two-tier system within large urban areas, and rationalised the number of county and district/borough authorities elsewhere in the UK. During the 1980s and 1990s the two-tier system within metropolitan areas was removed, and unitary authorities re-established and extended to other large towns (Leach and Percy-Smith 2001; Wilson and Game 1998). To date, the two-tier system persists in England, while in post-devolution Scotland and Wales[11] county councils have been abolished. Current moves to introduce a regional level of government in the north of England may also lead to the abolition of the county tier in those areas which adopt a regional tier of government. Of the case studies included in this research project, all are unitary authorities.

11 Following referendums in Scotland and Wales in 1997, in 1999 the Welsh Assembly and the Scottish Parliament were established. Each has elected members and an executive. The Scottish parliament can make and amend primary legislation in several areas (e.g. health, education, housing, environment) though some areas are reserved for UK legislation (e.g. defence, security, economic policy, Foreign Affairs). The Welsh Assembly can only make secondary legislation (e.g. in relation to health, education, housing, environment) pertaining to distinctive Welsh needs.

The relationship between central government and local authorities is governed by the legal principle of *ultra vires*. In other words, "local councils can do *only* what they are statutorily permitted to do. Their rights and competences are not general, but specific" (Wilson and Game 1998: 22). The statutory duties set by central government can be compulsory, dictating the activities local authorities must undertake, or discretionary, allowing for flexibility in the priority given to different measures and the ways in which they are implemented (Bulkeley and Betsill 2003: 59). Local authorities in the UK enjoy a degree of financial independence. Approximately a third of local authority income[12] is derived through either the local Council Tax[13] or the redistribution of local business rates[14], while, in terms of expenditure, levels of mandatory spending are estimated at between a third and a half of all expenditure (Wilson and Game 1998: 90). This mixture of specific competences and local discretion has led some commentators to argue that local government in the UK enjoys 'partial autonomy' (Wilson and Game 1998). However, successive Conservative administrations during the 1980s and 1990s took a more interventionist approach to local government, which was seen to reduce their autonomy by dictating the terms of service provision ('contracting out'), capping levels of local revenue, and reducing the powers of local authorities in key sectors, e.g. housing. Since 1997, under the Labour administration, the mantra of 'modernising' local government and its new public management ethos has been a critical policy objective. Nonetheless, under this regime, local authorities have been given some additional freedoms to determine their policy objectives and spending priorities. In 1997, Prime Minister Blair signed the 1985 European charter for local self-government, which "commits signatory member states to guarantee 'the right and ability of local authorities to regulate and mandate a substantial share of public affairs under their own responsibilities'" (Wilson and Game 1998: 89). While no

12 In the period 1997/98 to 2001/02, Gross Income for local authorities was derived from: charges for services (12%), Council Tax (16%); redistributed business rates (15%), central government revenue support grants (22%), other government grants (25%) and from other sources (10%) (Source: ODPM 2003). Recent changes to local government legislation have introduced a new borrowing regime for capital finance.

13 Council tax is a tax levied on property, with the amount being determined by the value of the property in the baseline year. It is "the main source of locally-raised income for local authorities. It is, therefore, the main source of funding used for meeting the shortfall between an amount a local authority wishes to spend, and the amount it receives from other sources, such as government grants" (ODPM 2003).

14 Before 1990, business rates, which are taxes on businesses, were set locally. Since then, they have been set nationally, and paid into a central pool. They are then distributed among local authorities on a 'per head' basis, with the payments being regarded as a type of government grant (ODPM: 2003).

power of general competence has been introduced, the *Local Government Act* 2000 includes a new duty on local authorities and the requirement to engage the public in local governance:

> The Local Government Act gives councils new powers to promote or improve the economic, social or environmental well-being of their area. Councils will now also be required to prepare comprehensive community strategies with local strategic partnerships and to fully involve local people in this process (ODPM 2004).

However, interventions in the form of 'Best Value Performance Indicators' (BVPI)[15] have been seen to impose greater central direction on local authorities (Cowell and Martin 2003), and local authorities are increasingly vocal in their complaint that they are being expected to undertake more duties with less resources. Taken together with the emerging regional agenda being promoted by central government, through the creation of regional strategies for planning, waste, transport and economic development together with directly elected regional assemblies, the autonomy of local authorities may be being reduced still further.

3.2 Local government in Germany

Contrary to the UK, German local authorities are, *not* restricted to the duties mandated to them by the national government or the states. Their rights and competencies are general. Basically, the municipalities are free to act.[16] However, like in the UK, the statutory duties set by national and state governments can be compulsory, dictating the activities local authorities must undertake, or discretionary, allowing for flexibility in the priority given to different measures and the ways in which they are implemented.

Local authorities in Germany are directly elected bodies and have multiple roles covering areas such as social services, land-use planning, transport or waste

15 'Best Value Performance Indicators' (BVPI) are a set of national indicators introduced in order that local authorities comply with the duty of 'best value' introduced in the 1999 Local Government Act. This requires local authorities to continually improve their functions in different areas, and to set targets and monitor performance against a range of indicators (BVPI).

16 At least within the limits set by various superior laws and regulations. The superior regulations in question range from European law (e.g. waste water directives, regulations governing the liberalisation of the electricity market), the *Grundgesetz* or German Basic Law (responsibilities and competencies in the area of energy policy), the federal legislation (Renewable Energy Sources Act, Federal Building Code; Federal Law on Nature Conservation) to regulatory provisions that apply in the individual *Laender* or regions (building regulations, local statutes or byelaws).

management. The Basic Law *(Grundgesetz)* and constitutions in each of the German states guarantee the right of every community to govern local affairs under its own responsibility. In Germany, local self-government has a long tradition, especially in the area of service delivery, with the principle being that local authorities are responsible for all basic needs of their citizens. In constitutional terms "the local authorities decide all matters relevant to the local community *(oertliche Gemeinschaft)* in their own responsibility within the frame of existing legislation" (*Grundgesetz*, article 28, section 2). The relations between different layers of government as well as the relations between state and society are ruled by the subsidiarity principle *(Subsidiaritaetsprinzip)*. On the one hand this means that higher levels of government should act only if lower levels are not able to provide the services or fulfil their tasks properly. On the other hand, the local welfare state "should restrict itself largely to … an enabling function, while the service provision itself should be left to the (non-public and not-for-profit) welfare organisations" (Wollmann 2003: 89). Despite the principle of subsidiarity, German local authorities traditionally directly provided a wide range of general services (the so-called *Daseinsvorsorge)* through public utilities. Starting in the 19th century, municipalities engaged in the provision of electricity, gas, water, public transport and the disposal of sewage and waste, creating quasi-monopolies owned by the municipality (Wollmann 2003: 89).

An important difference in the nature of municipal government between Germany and the UK is related to the fact that Germany is a federal state.[17] Germany consists of 16 states (including three city-states, Berlin, Hamburg, and Bremen). From a constitutional perspective, local authorities are part of the states. Local authorities are regulated by federal law as well as by state law. Most important for the internal procedures of the local authorities is the so-called *Gemeindeordnung* (Local Authority Act). Each state has set its own *Gemeindeordnung,* causing considerable differences in the role and responsibilities of local government between the German states (Kost and Wehling 2003). The different models can be traced back not only to the specific tradition of the states, but also to the influence of the allies in certain regions of Germany after WWII. However, in recent years a convergence process has taken place. Examples include the direct election of the mayor and certain elements of direct citizen participation. While these provisions have had a long tradition in southern Germany, they were not usual in the rest of

17 However, some differences between the UK and Germany in this regard have been diminished because of the devolution reform which took place in the UK.

Germany and have been introduced since the early 1990s[18] (cf. Wollmann 2003: 92-95; Rudzio 2000: 400-403).

Regarding the structure of the state government, differences between the states exist. Within the states *(Laender)* at least three levels of government can be distinguished: local authorities *(Staedte* and *Gemeinden),* counties *(Kreise)* and the state *(Land).* Additionally, in some states an extra layer of government has been established, the regional districts *(Regierungsbezirke).* Such regional districts are common in densely populated territorial states like North Rhine-Westphalia. All three case studies included in this report are located in states (Bavaria, Baden-Wuerttemberg, Hesse) with this additional layer of government (Wehling 2002, 2003; Dreßler 2003; März 2003). Although all three fulfil the functions of counties and therefore are *kreisfreie Staedte,* they are regulated and ruled by three layers of government: national government, state governments and regional districts. The structure of local governments differs considerably between the states. This is due to the fact that territorial as well as functional reforms depend on the state. Today Germany consists of almost 14,000 local authorities. When the three city-states (Hamburg, Bremen, Berlin) are excluded, the average size of local authorities varies between almost 46,000 inhabitants in North Rhine-Westphalia and less than 2,000 inhabitants in Brandenburg.[19]

In Germany, discussions on modernising local government and the debates on new public management started relatively late, but have had its strongest impact at the local level. In the 1990s, the 'New Steering Model' *(Neues Steuerungsmodell)* dominated the debate (Pollitt/Bouckaert 2000: 235 ff.; Naschold/Oppen/ Wegener 1997). It was replaced by new debates on public governance and the 'ensuring state' *(Gewaehrleistungsstaat)* (Reichard 2004; Schuppert 2003; Schedler 2000).[20] Recently these discussions have been superseded by the severe financial crisis of German local authorities. This development has been caused by fiscal reforms of the red-green government resulting in a decrease of revenues from

18 This development was stimulated by German unification and the necessity to enact *Gemeindeordnungen* in the new eastern states.

19 Local authorities in eastern Germany are considerably smaller than local authorities in western Germany.

20 Some of the most innovative local authorities combined their Local Agenda 21 processes, which started in Germany much later than in the UK, with EMAS certification — as a voluntary eco-audit scheme (cf. Pfaff-Schley 1998; Koch 2003). The legal basis for the application of EMAS to local authorities was enacted in 1998.

local business taxes *(Gewerbesteuer)* and income taxes.[21] As financial transfers from the states and the federal government have also decreased,[22] while expenditures for compulsory social services have increased, most German local governments no longer have the capacities for voluntary tasks; this, in turn, erodes the principle of 'self-government'. Currently, discussions are dominated by a general debate about the definition of the services which should be guaranteed by the state, and new modes of governance such as different forms of internal as well as external contracting or public private partnerships.

3.3 Competencies and powers for local climate protection in Germany and the UK

In Germany, the competencies of local government with regard to climate protection are primarily a question of legal qualification. Despite the multiplicity of laws and regulations that are relevant for climate protection, climate change policy is considered as a voluntary task and the municipalities have freedom of choice to become active or not. With voluntary self-government, the municipality is free to decide within the framework of the superior legislation which measures it would like to take, and not only 'whether', but also 'how' such measures should be implemented. Examples here include city council resolutions for the reduction of CO_2 emissions, the adoption of energy-saving models in schools, the provision of environmental advisory services for citizens and regulations for mandatory connection to and use of district heating systems.[23]

Despite the lack of an explicit statutory duty to address climate change, in the UK local authorities have various duties which relate to climate protection, including BVPI for energy use, the Home Energy Conservation Act, and guidance on transport and land-use planning (see below). At the same time, the new duty of 'well being' has been seen as potentially providing justification for the action of local authorities in this area. Even given the fragmented nature of those obligations which do exist, and a high level of discretion for local authorities in interpreting government guidance on planning and transport and the new duty of 'well being',

21 In Germany, no local income tax exits, but 15% of the general income tax is transferred to the local authorities.

22 In 2003, the three main revenues of local authorities were taxes (about 33%); fees (about 11%) and transfers from the states and the federal government (about 34%) (cf. Karrenberg and Münstermann 2003, 1999).

23 For details on local climate change policy in Germany see Kern et al. (2004b).

it is clear that the UK national government recognises the potentially critical role of local authorities in addressing climate change. The UK's national climate change strategy argues that:

> Local authorities have a special status as local, directly elected bodies. They are uniquely placed to provide vision and leadership to their local communities, and their wide range of responsibilities and contacts means that they are critical to the delivery of this programme. They can take forward the action needed on the ground to cut emissions, working with local communities, and will be central to efforts to adapt to the impacts of climate change (DETR 2000a).

At first glance this may seem to contradict the legal position which UK local authorities find themselves in. However, the 'partial autonomy' enjoyed by local authorities in the UK means that the principle of *ulta vires* is only followed to a limited extent, and that local authorities can, and have, undertaken a range of activities in the arena of climate protection without the official mandate of central government.

3.4 The institutionalisation of local climate protection in the UK and Germany

Related to the competencies and powers of local government, the institutionalisation of climate protection policy within the local authority, both in terms of its location and the extent to which formal strategies, action plans and reduction goals have been developed and implemented, is critical to the success of local climate protection policy. In the majority of municipalities in Germany and the UK, climate protection tasks are managed by environment departments. Thus, the tasks that arise in the various areas of climate protection are mainly carried out by the employees of the environment unit; however they are also carried out by EU experts, the planning authority, the office of the building surveyor and the energy unit (DIFU 1997: 57-58).

In *Southampton* climate protection is located within the Planning and Sustainability Department, which was seen as an advantage as it engendered trust in working with others in the local authority because "that's where decisions are made" (SCC Interview July 2003), though housing issues are dealt with separately. In *Kirklees*, climate protection policies, both in terms of energy efficiency and renewables, are part of the responsibility of an Environment Unit located within the Department for Environment and Transportation, while in *Leicester,* climate protection is primarily orchestrated at an arms length from the city council,

through the energy management group and its associated organisations, the Energy Agency and Energy Advice Centre. While both Southampton and Kirklees have agencies and advice centres which undertake projects and promote climate protection, these operate more independently from the municipality than is the case in Leicester. In the three case studies from the UK, inter-departmental co-operation has involved either LA21 working groups on energy issues, or the production of particular projects or strategies, with day to day working being segmented along traditional departmental divisions.

In Germany, the institutionalisation of climate protection in the three case studies is similar as the responsible units belong to departments which are responsible for environmental affairs and some other competencies. In *Heidelberg* the Environment Unit is located in the Department for Environment and Energy *(Dezernat Umwelt und Energie),* in Frankfurt am Main the Energy Unit is part of the Department for Schools, Education, Environment, and Women *(Dezernat Schule, Bildung, Umwelt und Frauen),* and in Munich the Environment Unit is found in the Department for Health and Environment *(Referat Gesundheit und Umwelt).* However, there are two differences between the German case studies worth mentioning: In *Frankfurt am Main* the energy unit is not part of the environment unit, but has the same status within the administration, which implicates a better position within the administrative hierarchy. In *Heidelberg* a rather unique administrative reform took place in 1992, when the responsibilities for the management of municipal buildings were transferred to the environment unit. Similar reform initiatives were started in *Munich* and in *Frankfurt am Main* but failed due to the size of both cities and the cost involved. However, cooperation between the responsible units within the different Departments is well established.[24] As in many other German municipalities relevant working groups within the administration focus on the energy sector.

Systematic climate protection strategies and action plans were adopted in many local governments in Germany in the 1990s (BMU 1995: 169 ff.). Systematic climate protection strategies can be found above all municipalities with over 400,000 inhabitants. Such climate protection strategies tend to involve guiding principles and should be understood as general frameworks for the future orienta-

24 Recently, in some German municipalities the reorganisation of administrative structures has emerged as a result of financial restrictions. This means that climate protection agencies are being reintegrated into the municipal administrations. This development is frequently facilitated by the fact that the separation of such groups (Climate Protection Office, Agenda 21 Offices, etc.) was intended as a temporary measure from the outset.

tion of local climate policy. Most municipalities have also developed action plans in recent years, although only some of these are based on systematic climate protection strategies. Some municipalities refrained from developing a systematic climate protection strategy from the outset and concentrated directly on the development of concrete action plans. The vast majority of both the systematic climate protection strategies and the actions plans relate only to the energy sector. Moreover, most of climate protection strategies and action plans are not being continued and systematically implemented for financial reasons.

Heidelberg, Frankfurt am Main and Munich were clear forerunners. In 1990, the city council of *Heidelberg* decided on a concrete reduction target for CO_2 emissions, 20% until 2005 (based on the level of 1987) (Stadt Heidelberg 2000: 3). On the basis of a scientific study, conducted in 1991, an action plan, including energy and transport, was developed. In the same year *Munich* city council decided on an energy saving concept *(Energiesparkonzept fuer die Landeshauptstadt Muenchen)*. In 1992 *Frankfurt am Main* began a detailed energy and CO_2 auditing process (*CO_2-Bilanz*) where a quantitative assessment of energy used is undertaken and the equivalent CO_2 emissions are calculated, and all three municipalities have developed monitoring procedures and agreed on the necessity of CO_2 auditing. However, the preparation of such reports is very costly and time consuming, and recently annual monitoring has not taken place. In all three municipalities the most recent reports were published in 2000/2001 (see, for example, Stadt Frankfurt am Main 1992, 1995).

In the UK, in contrast, specific 'climate protection' strategies have been more recently introduced in Leicester, and in draft form in Southampton and Kirklees, following the CCP-UK pilot,[25] and tend to include a variety of sectors. In Leicester, the strategy was built upon the 1994 Leicester Energy Strategy, which was an innovative strategy, and numerous other energy, planning and environmental policies. Rather than being produced within the City Council, Leicester's climate change strategy was developed by the Leicester Environment Partnership and the Leicester Strategic Partnership, written by members of the Institute for

25 The CCP-UK initiative was a UK pilot of the International Council for Local Environmental Initiatives' (ICLEI) Cities for Climate Protection programme, and was organised by the Improvement and Development Agency (IDeA) in conjunction with ICLEI Europe, and funded by IDeA and the then Department for Environment, Transport and the Regions (now DEFRA). The pilot involved 24 local authorities over a period of almost two years. A 'roll out' of the pilot, a scheme to involve more local authorities in reducing their own in-house emissions of greenhouse gases by 5%, is being developed by the Carbon Trust in consultation with ICLEI.

Energy and Sustainable Development at De Montfort University and with guidance from a cross-departmental group of officers from the City Council. This broad approach to strategy development has meant that the objectives encompass adaptation, mitigation and public debate, with mitigation involving action in respect of energy supply, transport, homes, waste and monitoring. However, although the policies at international, national and local levels with some bearing on the Climate Change Strategy are identified, it is unclear where the responsibility and funding for following through the objectives, and in particular developing and implementing the energy service company[26] which is at the heart of the proposed approach for the future, will lie.

3.5 Summary

German municipalities, although bound by a multilevel framework of laws and regulation, have a good deal of freedom through the principle of self-government to address issues of climate protection. In the UK, the new duty of securing 'well being' within the community potentially opens the door for local authorities to have more independence in relation to issues of sustainable development, however, at the same time the 'local government modernisation agenda' is serving to tie local policy goals ever more closely to central government. Nonetheless, and despite the principle of *ultra vires* in the UK and the need to bow before superior laws in Germany, many municipalities in each country have implemented a range of voluntary measures to address climate protection, within and around the structures imposed by the legal framework in each case. In reality, the differences between the two countries are less distinct than could be expected from the legal perspective. This is due to the fact that most German local authorities lack the financial resources to provide voluntary services, and hence operationalise the principle of self-government.

In terms of the institutionalisation of climate protection, in both Germany and the UK either environment or energy units, located frequently within departments with a broad remit for environmental protection or planning, are the locus of

26 An energy service company (ESCO) provides integrated energy services (e.g. heating, lighting) to customers rather than energy (e.g. gas, electricity). One example in the UK is Thameswey Ltd (TW), "an Energy and Environmental Services Company or EESCO wholly owned by Woking Borough Council which enters into public/private joint ventures to deliver its energy and environmental strategies and targets (primarily energy, tackling fuel poverty, water, green waste and green transport)" (CHPA 2004).

action. Given the cross-cutting nature of climate change as an issue, however, municipal policy in this field inevitably needs to cut across organisational divisions, and a feature of most of the pioneering local authorities included in this study is an element of cross-departmental working. While comprehensive climate change strategies have been developed earlier in Germany, in the UK some innovative local authorities (e.g. Leicester, Newcastle, Kirklees) had previously developed energy or sustainable development strategies which included climate protection policies and measures. In the next section, we consider the sectors in which local policy for climate protection has been developed.

4. Spheres of local action in local climate change policy

From our research project, it is clear that local authorities have at least some role to play in climate protection in a number of different areas. The four most important sectors for action are: energy; transport; urban planning; and waste.[27] Here, we consider in turn the potential for local authority action in each of these sectors, and the activities that are taking place in some municipalities (see table 1).

4.1 Energy

Action in the energy sphere encompasses measures to improve energy efficiency (in municipal buildings, in the housing stock, in businesses) and schemes to develop renewable energy (through purchasing green power for the municipality, running demonstration projects, and facilitating the development of renewable energy in communities and businesses).

In Germany, municipalities have traditionally operated their own energy companies. In the area of climate protection this had advantages as the generation of electricity could be influenced directly to give priority to district heating systems and/or Combined Heat and Power (CHP), investments in energy efficiency or renewable energies. This situation changed completely with the implementation of an EU Directive[28] which has led to a liberalisation of the electricity markets. In Germany, the 1998 Power Industry Act *(Energiewirtschaftsgesetz)* has restricted the

27 Other sectors include housing and procurement, which are discussed here under energy, and broad areas such as health, where planning for the impacts of climate change may be important, and education, which is an important means of shaping attitudes and actions in relation to climate change.

28 Richtlinie 96/92/EG betreffend gemeinsame Vorschriften fuer den Elektrizitaetsbinnenmarkt, ABl. L 27, (30.1.1997).

influence of municipalities over the generation of electricity mainly to their options as shareholders. As the electricity markets changed considerably and competition has increased, the remaining municipally owned companies have restricted themselves to the distribution of electricity, while its generation is left to big private companies. This means that German municipalities have lost their potential to influence the supply side of energy almost entirely. However, the 2000 Renewable Energy Sources Act *(Erneuerbare-Energien-Gesetz)* and the 2002 Combined Heat and Power Act *(Kraft-Waerme-Kopplungs-Gesetz)* may promote the development of renewable energies and CHP, though this is still an open question. Nevertheless, many German municipalities have achieved considerable success in other areas of the energy sector. In fact, the majority of measures undertaken in relation to climate protection are concentrated in this sector, in particular in those areas in which the municipality can directly control its own consumption — as is the case in the energy management of municipal properties. Energy-saving projects in which a part of the amount saved is allocated to the Energy Commissioner *(Energiebeauftragte)* or user of the building in question (e.g. 50/50 projects for schools) and energy contracting with external operators[29] are particularly popular.

In the UK, energy management of municipal buildings has also been popular and provides the bulk of activities undertaken by local authorities in relation to climate protection. This has been recently given added weight by the uptake of EMAS across local authorities, the development of the Councils for Climate Protection (CCP-UK) pilot, which focused on this area of action, and by the introduction of BVPI for energy use within council buildings. However, in the UK there are few examples of the financial flexibility afforded to German municipalities, with Kirklees being one exception where an Energy and Water Conservation Fund has been established, from which parts of the council can borrow to undertake energy efficiency measures and repay this loan through the economic savings made.

In the UK, energy efficiency issues in the public housing sector has long been a concern of local authorities and the introduction of the 1995 Home Energy Conservation Act (HECA), gave this area added significance. The HECA requires

29 Contracting means that a contract with a private investor is placed. This private company invests in energy savings measures in the municipal buildings. The contractor gets all the benefits from the energy savings. After the end of the contract all installations become property of the local authority (cf. Timpe et al. 2001: 78-83; Neumann 1996: 301; Brieden-Segler and Merkschien 1996).

local authorities to produce a report detailing practicable and cost-effective energy efficiency improvements across the housing stock, both public and private, in their area, and to work towards the target of reducing emissions of carbon dioxide from the housing sector by 30% of 1990 levels by 2005 (Jones and Leach 2000). Although many local authorities undertook measures to address energy management throughout the 1970s and 1980s, this was conducted in a voluntary manner. The HECA made it a statutory requirement that local authorities (those which are energy conservation authorities) at least acknowledge the issues of energy conservation in the housing stock in their local area. However, "while there is a duty on all authorities to submit an annual progress report on HECA, there is in fact no legal duty to make any progress towards the target" (Jones and Leach 2000: 72). The impact of this statutory duty on local climate protection is therefore questionable. However, there have been a number of other funding schemes initiated by central government to address home energy efficiency and fuel poverty, and local authorities have a significant role in both directing members of the public to such schemes and in bidding for funds (e.g. through regeneration projects) to undertake energy efficiency measures.[30] In Germany, comparable schemes (e.g. reporting requirements or targets for emission reductions) do not exist.

With respect to renewable energy, local authorities in Germany and the UK have primarily undertaken two types of voluntary action. First, to purchase a percentage of their energy from 'green' sources. In Heidelberg for example city council decided in 2001 to spent 330,000 euros annually for a share of 25% renewable energy consumption in municipal buildings. Second, local governments in both countries have developed renewable energy demonstration projects — frequently with EU funding (e.g. ALTENER programme) derived through membership of transnational municipal networks, though these are also sponsored by the UK Energy Savings Trust.[31] Municipalities in both countries also have a role in

30 For further details, see Bulkeley and Betsill 2003, chapter 7.

31 The Energy Savings Trust was established in 1992 in the wake of the United Nations Conference on Environment and Development. It is a not-for-profit organisation which is primarily funded by central government with the remit of delivering energy efficiency to householders. To this end, it has established a network of 52 Energy Efficiency Advice Centres (one of which is present in each of the UK case studies) and an energy efficiency campaign. In addition, it provides a resource called 'Practical Help' to assist local authorities in delivering energy efficiency to householders and administers the 'Community Energy' scheme, developing new community heating and CHP schemes. For further information, see <http://www.est.org.uk>.

promoting renewable energy and energy efficiency schemes developed by other actors (e.g. central government, utilities) through education campaigns.

4.2 Transport

The transport sector encompasses both transport planning, which is of course closely related to land-use planning, public transportation and the municipal fleet. In both the UK and Germany, transport is clearly the most problematic sector in the context of municipal climate protection. It is responsible for a large part of municipal CO_2 emissions and, while in Germany reductions have been achieved in many other sectors, increases are still being recorded in the transport sector, and in the UK the transport sector has the fastest rate of increase in emissions of any sector. The implementation of long-term targeted measures is made difficult by the large number of actors involved. Moreover, it is difficult to identify another municipal field of action in which the conflict between short-term individual behaviour and long-term political objectives is so extreme. This is particularly true in the area of private motorised transport and it is very difficult to win the population's support for energy-saving measures in this context. The lack of willingness on the part of political leaders to adopt corresponding measures is directly related to this phenomenon.

In the UK, local authorities are required to report under the 1997 Road Traffic Reduction Act on the levels of greenhouse gas emissions from the transport sector and they are also directed by central government to take climate change into account in the preparation of Local Transport Plans (LTP):

> At the moment local authorities tend to address climate change under the wider banner of Local Agenda 21. We will expect authorities to consider what more might be achieved through action on local transport. LTPs should, therefore, have as one of their objectives, the aim of contributing to reducing the forecast growth in CO_2 emissions from transport (DETR 2000b, p. 71).

Through the development of LTP, UK local authorities have the power to introduce demand management measures, such as reducing the available road space for private vehicles, improving infrastructure provision for alternative transport, and, perhaps most importantly, through the use of workplace charging levies and road-user charging. However, to date the focus of LTP has been on widening choice,

rather than attempting to restrict demand for car travel.[32] This has been undertaken by a range of measures aimed at making public transport more attractive. The extent to which UK local authorities can undertake such measures is limited by the fact that public transport (both bus and rail) is provided by private companies, with the result that measures are restricted to changing infrastructures (e.g. provision of Park and Ride facilities in partnership with private companies, or cycle lanes) or trying to encourage behavioural change (e.g. through 'walk to school' programmes or 'green travel plans' for businesses). Moreover, policies and actions in relation to transport are only rarely included in climate protection policies, strategies or measures, and when they are, as in the case of Leicester, initiatives tend to be restricted to the sorts of piecemeal approach which is characteristic of the LTP, rather than to include any specific schemes related to the overall climate change strategy.

As in the energy sector, German municipalities traditionally provided public transport through their own companies. Like the energy sector, this situation has been changing considerably as energy and transport markets have been liberalised. In Germany, services are still provided by companies owned by the local authorities and subsidised by federal and state governments, although it is questionable whether this is compatible with EU regulations. However, the liberalisation of energy markets have already had far-reaching consequences for the transport sector as before liberalisation public transport had been subsidised by profits made in the energy sector. After liberalisation this is not longer possible. As new EU regulations are under way it is unclear how these recent developments will finally affect local authorities and transport provision. Nonetheless, since local authorities have to ensure that public transport services are provided, they will still be able to influence the transport system by the local public transport plans *(Nahverkehrsplaene)*.[33]

Although the transport sector is frequently part of climate strategies and climate action plans of German municipalities, even the pioneers which are included in our study have largely failed to address this issue. Success stories seem to be

32 One exception is the introduction of 'congestion' charging in London, where a levy is placed on car drivers who use the central zone of the city during the day. Durham City Council has also introduced a road-user charge for a small part of the city. While other local authorities have the power to introduce such schemes, and Workplace Charging Levies, they have been reluctant to do so because of concerns about a lack of public support and consequent political implications (Bulkeley and Rayner 2003).

33 This is based on federal law *(Regulierungsgesetz)* as well as on state laws on public transport (see Werner and Schaafkamp 2002: 147).

rare. The implementation of transport development plans *(Verkehrsentwicklungsplaene)*[34] has proved to be very difficult, especially when bigger projects are involved. Most actions aim at a change of the modal split, especially at a reduction of motorised individual transport *(Motorisierter Individualverkehr, MIV)*. An example is the draft for the new transport development plan *(Verkehrsentwicklungsplan)* for Munich, which contains the target to reduce MIV from 40% to 35%. However, in Munich a proposal of the green party to reduce CO_2 emissions from transport by 5% within 10 years was rejected by the city council. Thus, even in the pioneering municipalities, in both countries the priority given to climate protection in this policy field is relatively low. Climate protection measures in this sector tend to be limited to smaller projects (e.g. the construction of cycle paths,[35] the development of public transport and the creation of zones with traffic-calming).

In terms of their own fleet, local authorities in both countries are experimenting with alternative or dual-fuel cars and vehicles, though this remains on a small scale. In addition, many UK local authorities have 'green travel plans' in place through which they seek to change the travel behaviour of their employees. In Germany, local authorities test mobility management as a new tool and establish mobility centres — for their own employees as well as for private companies. Local governments in Germany subsidise tickets for public transport systems and make bikes available to their employees, and some such schemes also take place in the UK. Like many other European cities, municipalities in Germany and the UK organise events for the European 'Car Free Day', on September 22, and the European mobility week (Klima-Bündnis 2000b).

4.3 Planning

In the UK, strategic land-use or development planning is currently conducted at the local level (by either county councils or unitary authorities), but it is structured by both Regional Planning Guidance (RPG) and national Planning Policy Guidance (PPG). Since the early 1990s, successive revisions to PPG and RPG have included guidance on the need to reduce energy use in urban areas, for example through measures which consolidate the urban form, such as mixed use develop-

34 Contrary to public transport plans *(Nahverkehrsplaene),* transport development plans *(Verkehrsentwicklungsplaene)* include all forms of (public as well as private) transport.

35 In Heidelberg more than 5 million euros were invested in the construction of cycle paths between 1991 and 2000.

ments, brownfield land redevelopment, reducing the need to travel, and by including energy conservation in design, through increased standards of energy efficiency or the inclusion of renewable energy technologies in housing design. Local authorities have to comply with some elements of PPG, such as minimum density requirements for new housing, and have discretion to introduce other local guidance, for example on energy efficiency standards for buildings which surpass those required by national building regulations. However, evidence suggests that to date there are few policies and measures related to energy conservation in the majority of strategic planning documents and that such considerations feature rarely in development control decisions (Bulkeley and Betsill 2003; Bruff and Wood 2000; Counsell 1998).

In Germany, land-use and development planning is regulated by the Federal Building Act *(Baugesetzbuch),* which includes general ecological goals, and by state laws. Additionally, in 2001, the federal government introduced the Energy Savings Directive *(Energieeinsparverordnung, EnEV)* which sets out building standards. However, as these standards are not very strict, it has been questioned whether local authorities can set stricter standards in their development plans. Furthermore, there exists an ongoing controversy over a specific provision in the Federal Building Act, which allows local authorities to ban certain fuels for residential heating in their development plans (Neumann 1995: 91). Some local authorities used this provision to force constructors to connect new buildings to district heating systems. As the legal situation had been unclear, some clarifications of this provision of the Federal Building Act were proposed. Moreover, there have been already several court decisions on cases where municipalities tried to force constructors to connect to district heating installations based on specific provisions of the Local Authority Acts *(Gemeindeordnungen)* of the states'.[36] As such regulations must be based on the different Local Authority Acts of the states, such regulations are legal in some states but not in others. Moreover, in some cases, local authorities have been able to set stricter standards in private contracts (property purchase agreements) between the municipality and the constructor than those stipulated in state or federal law. Despite these initiatives, it has been argued that municipalities do not take advantage of all their legal opportunities in this area. This has less to do

36 Such provisions *(Anschluss- und Benutzungszwang)* can be found in all Local Authority Acts *(Gemeindeordnungen)* in the different German states. Traditionally, they have been applied for example to prevent residents from using their own well springs and force them to use the public infrastructure instead.

with specific legislative provisions than resistance in parts of the administration. This situation may also explain why the Climate Protection Commissioners focus their activities on areas of activity where the situation can be changed more easily than in this traditional area of local politics.

In both countries, work in this area frequently involves smaller pilot projects (e.g. Munich-Riem), demonstration projects for the integration of new or renewable energy into development projects (e.g. Kirklees, Southampton, and Leicester) and one-off 'eco-houses' (e.g. Leicester) showing the potential for combining energy efficiency and renewable energy in housing design. It is still an open question whether such projects will change the general planning routines over time.

4.4 Waste

In Germany, the waste management sector is only partially privatised. Most household waste is still managed by public companies.[37] What is significant here is that the disposal companies are still owned by the municipalities and are thus subject to decisions made by the city councils, for example, to recover energy from waste. Therefore, it is far easier to implement climate protection measures in these areas than in the energy or transport sectors. For example, efforts are made to generate energy and district heating; recycling and composting are supported, and energy is also generated from biological waste. However, in most German municipalities waste policy is not systematically integrated in local climate protection strategies.

In contrast, in the UK waste disposal companies are predominantly private, and the emphasis has traditionally been on the disposal of waste to landfill with little recovery of energy or value, and low levels of recycling. However, in response to the Landfill Directive, the UK's *Waste Strategy 2000* introduced mandatory targets for local authorities to recycle and compost waste, in the form of BVPIs. Non-compliance will result in financial penalties, and waste is an increasingly important issue on local agendas. In the main, the impact on climate protection will be through reducing landfill, though there are some proposals for either increasing the capacity of existing 'Energy from Waste' plants or building additional plants, though this has proven unpopular with the public. Though in the

37 The situation is different for industry and trade where private systems were developed (e.g., the *Gruener Punkt* or green dot system).

past the waste sector has been marginal to climate change policy, it is becoming an increasingly important component of municipal action.

4.5 Summary

In both countries the levels of activity in relation to climate protection in each sector differ considerably. Most initiatives take place within the energy sector, while they are rare in the transport and planning sectors. Major differences between both countries exist in the waste sector, which has not been liberalised and privatised in Germany, though increasing responsibility to reduce and recycle waste in the UK has meant that its importance as an arena for climate protection is increasing. In contrast, policy and action in the planning sector appear very similar in both countries, where there is both a dependence on other tiers of legislation and regulation, and a lack of willingness to act locally. In the energy and transport sectors some similarities can be found, but differences persist. In transport, local government in both countries face challenges in implementing demand management policies, though the role of German municipalities in providing public transport services remains an important difference. In the energy sector, municipalities in both countries have considerable scope for acting in relation to their own consumption and have pursued a number of voluntary initiatives and projects. However, in Germany the long-standing ability to influence the local supply of energy has been diminished because of liberalisation, and voluntary schemes are under pressure due to the changing financial circumstances of local government. In this regard, their position is *de facto* more akin to that of UK local authorities, where influence over energy supply is limited and emphasis is placed on facilitating and promoting action by other actors in relation to energy efficiency and renewable energy.

5. Roles of the municipality in local climate change policy

As the last section implied, the actions which local authorities undertake in each of these sectors relate in turn to the different roles which local authorities play as: (1) consumer and model; (2) planner and regulator; (3) supplier and provider of services; and (4) enabler.[38] While the particular roles adopted by local authorities will change over time and with context, it is possible to identify generic action

38 Regarding the different roles of municipalities in climate protection policy see Klima-Bündnis (2000a: 13-19; 2003: 32).

measures which are undertaken in these different roles in relation to energy, transport, planning and waste (table 1). However, it should be noted that these roles cannot always be neatly divorced from one another — for example, the 'planning and regulating' role of local authorities in relation to energy efficiency in the design of new buildings is partially one of directing others to include such criteria in design specifications (regulating), but at the same time one of advising and persuading developers and architects to take these criteria into account (enabling).

Overall, it has been argued that in the UK the past two decades have seen a shift in the role of local authorities away from straightforward service delivery and planning/regulatory roles to a more complex 'enabling' position where local authorities are engaged in partnerships with other private and civil society actors through which these functions take place. In Germany, the traditional role has been one of service provider, but the situation has been changing because of EU regulations that caused the liberalisation of markets in the energy and transport sectors. Therefore, the actions taken by local governments have shifted towards (1) consumer and model and (2) enabler.[39] Below, we consider how the local authorities investigated in this research project have responded to climate change in each of the different roles they play.

5.1 The municipality as consumer and model

The implementation of climate protection measures is comparatively simple in areas in which the municipality has the freedom to make its own decisions. Thus, the majority of the climate protection measures implemented by municipalities in both Germany and the UK are of this kind. However, energy consumption of the local authority only accounts for between 1% and 5% of total CO_2 emissions in the area of municipal jurisdiction.

In Germany, contracting has emerged as a means of implementing the relevant measures and is now practised in many local governments. Numerous measures are implemented in this context, primarily in the area of energy management in both old and new buildings. Projects in the area of energy contracting can be found in all three German case studies, for example in *Heidelberg* where 5.6 million euros private capital has been invested in contracting projects (total amount until

39 Cf. status report of the Climate Alliance 2003; this report is based on a questionnaire answered by about 80 German municipalities. The projects mentioned are clearly concentrated on the consumer and model role and on the enabler role (cf. Climate Alliance 2003).

November 2003). Furthermore, projects involving co-operation with third parties are successful because ultimately they also implement the measures in question. Equally worth mentioning here is the evolution from contracting to the so-called *'Intracting'*,[40] whereby the provision of the relevant finance and its repayment is handled within the administration. In *Munich,* this concept is further developed. An investigation of 1,000 municipal buildings was conducted by the administration to identify concrete potential for action. 3,000 individual measures were identified with savings of 1 million euros annually. In Heidelberg as in Munich, the adoption of more stringent standards (than those mandated in the relevant federal provisions) in the municipalities' own building projects has emerged as one of the most successful strategies for the implementation of climate protection measures. German municipalities are also active in the area of procurement. For example, all municipalities belonging to the Climate Alliance are obliged to purchase products made from certified timber (Certified by the Forest Stewardship Council, FSC).

In all three UK case studies, energy management in buildings has been equally important and all have developed some monitoring of energy use in their own buildings. While central government has recently mandated this through the BVPI, this has been an area in which each local authority has developed initiatives ahead of central government action, for example through the use of EMAS. Leicester has the most extensive monitoring process, with real-time data available at half-hourly intervals to the energy management team. In this way, the energy manager is able to monitor unexpected surges in consumption (e.g. a tap left running over night) and implement solutions (e.g. automatic taps which turn off after a certain time interval). It has also enabled the energy management team to show the cost savings available from fitting energy efficient equipment, and to monitor behavioural change ensuing from new technologies or education campaigns. As large consumers of energy, local authorities have also promoted the use of green energy through their purchasing policies. In addition, several demonstration projects of energy efficient or renewable energy provision have been run in the local authorities, including CHP, photo-voltaic, and solar hot water schemes, for or on council buildings. Other initiatives include those which focus on changing the behaviour

40 The so-called *'Intracting',* which means *'internal contracting',* is based on the same principle. The only difference is that the contractor is an actor within the administration. In this case the risks are higher and the investments have to be paid by the local authorities but the local authority gets all the benefits from the very beginning (cf. Timpe et al. 2001: 83-87; Klima-Bündnis 2000a: 21-22).

of employees. In Southampton, employees are being encouraged to travel to work in sustainable ways through the Green Transport Plan and receive a newsletter about internal environmental initiatives that are taking place in the local authority, while in Leicester behavioural change is promoted through the use of the real-time monitoring system, as well as through the Green Travel Plan, and in Kirklees through the EMAS process.

5.2 The municipality as planner and regulator

It is far less usual for German municipalities to be active as planners and regulators in the area of climate protection policy. Indeed, it is striking that the potential available to the municipalities on the basis of their individual statutes or byelaws[41] is rarely exploited. This can be explained more in terms of internal problems than external resistance, e.g. among the population. An example of this phenomenon in the German case studies is Frankfurt am Main where the adoption of mandatory connection and use of the district heating network in development planning failed, not as a result of the opposition of energy suppliers and end users, but as a result of coordination problems within the administration constraining the implementation of comprehensive concepts. However, some municipalities have actually succeeded in implementing at least pilot projects of this kind, e.g. the pilot project in the Munich-Riem district.

Local governments in the UK currently have a strategic role in land-use planning, in terms of directing where development should take place, and are responsible for regulating new buildings through development control. In each case, climate protection can be taken into account, for example in favouring compact city development, providing supplementary planning guidance which requires higher standards of energy efficiency in buildings than national regulations, or in incorporating new and renewable energy into building design, though in practice, as is the case in Germany, these opportunities are not systematically exploited. In part, this is because in each case the local authority has only partial autonomy from central government, which sets the overall planning context, determines building regulations and also reflects the conservative culture amongst the construction industry in the UK.

41 The local statutes/byelaws are laws made by the German states *(Laender)*.

Nonetheless, climate protection concerns have been included within planning policy at the local level. In Southampton, mitigating and adapting to climate change has been integrated into the draft Local Plan which states that applications for development will need to demonstrate that they have, where possible, incorporated passive solar design, potential for connection to CHP or district heating schemes and the use of renewable energy technologies (SCC 2004: 29). Through their role as chair of the regional energy task group established by the East Midlands Regional Assembly, Leicester City Council was instrumental in ensuring that Regional Planning Guidance (RPG8) included reference to an 'energy hierarchy', so that local policies and practices seek to sequentially 'reduce the need for energy; use energy more efficiently, use renewable energy, [and] any continuing use of fossil fuels [is] to be clean and efficient for heating and co-generation' (GOEM 2002). This approach, as well as policies for additional renewable energy capacity and for development to take place where it can access these energy resources, have been retained in the revised draft RPG8 (EMRLGA 2003). Given that RPG8 provides the framework for local development planning, it provides a potentially significant framework for planning and regulating development in terms of climate protection. Leicester has also developed the 'Leicester Better Buildings' standard to encourage developers to include more sustainable design in their development proposals.

In addition to the development of planning strategy, the sorts of demonstration projects evident in Germany were also taking place in the UK. Leicester City Council has earmarked the new development, Ashton Green, to the north-west of the city, for development as a sustainable settlement including climate protection measures. In Kirklees, both the 'SUNCities' project and the 'Zero Emissions Neighbourhood' projects are seeking to develop exemplars of the incorporation of renewables into mainstream housing developments.

5.3 The municipality as supplier and service provider

In Germany, municipalities have traditionally assumed the role of suppliers and service providers in electricity generation, transport, waste disposal and local-authority housing. Although this situation has been changing under liberalisation, it can be stated that municipalities still owning companies which provide public services *(Stadtwerke)* are more successful in climate change policy (Weimer-Jehle et al. 2001: 4). Even if the service provider is still owned by the municipality, co-operation between the municipality and the company is significantly more success-

ful in the energy sector than in the area of transport. In Frankfurt am Main, it has proven difficult to integrate climate change concerns into public transport policy because different units within the administration as well as several private companies are involved, which makes it difficult to reach an agreement on a public transport system taking climate change issues into account. However, because of the liberalisation of electricity markets by the EU, the influence of municipalities in the energy sector is also declining. Nonetheless, certain pioneering municipalities, among them Heidelberg and Munich, have succeeded in reaching agreement with their municipal works for the development of climate protection funds even within the context of liberalisation. In Munich the *Stadtwerke,* a private company owned by the city of Munich, charges a premium of 1.5 cent/kWh for electricity from renewable sources, which is transferred to a special fund. These resources have been invested in innovative projects such as PV installations. The fund has increased to about 2 million euros and will be used for a major project in the near future. In Heidelberg, where the city holds about one third of the shares of the *Stadtwerke Heidelberg,* has also created a fund for renewable energy. Here, the surcharge is 4.6 cent/kWh, and the funds are invested in the expansion and distribution of renewable energy. In Frankfurt am Main, the *Mainova AG,* a private company with the city holding the majority of the shares, supports only minor projects in relation to climate protection (housing, heating systems), and there is no special fund for the support of renewable energy.

In Germany, the situation in the area of waste management is very different as waste management companies are still owned by the local government and hence can be directly influenced. Special attention is paid by municipalities to ecological issues, in general, and climate protection issues, in particular. In Munich a waste strategy was introduced in 1988, which included ecological aspects and is implemented by a municipally owned company, the *Abfallwirtschaftsbetrieb Muenchen*. This strategy was revised in 1999, and the relevance of decisions for climate change was explicitly included. In Heidelberg the waste strategy of 1991 was revised in 1996 and the revision includes provisions to avoid CO_2 emissions.

In relation to climate protection UK local authorities have a role of service providers for waste, though this is frequently contracted out to the private sector, housing and — in the case of the local authorities in this research project — energy. In both Leicester and Southampton, the local authority is involved in supplying energy to houses and businesses through a district-heating scheme, fuelled by CHP. In Leicester, the local authority has been involved in supplying renewable

energy to a small number of homes through the piloting of solar rental scheme, and in Kirklees through the 'Simply Solar' scheme where solar hot water schemes are installed through accredited companies at a subsidised rate. More recently, Leicester has been awarded a £5.1 million grant to develop the first phases of an inner-city CHP and district heating scheme, fuelled by biomass, which will supply heat to four council-housing estates, and to 16 council buildings (DEFRA 2003). In terms of housing, local authorities act as a supplier through the provision of council housing, and a service provider through facilitating the retrofitting of energy efficiency measures in the housing stock. In addition to taking measures to improve the energy efficiency of their own building stock, all three authorities have implemented home energy efficiency improvements within the private sector from a mixture of grant-based funding, usually through regeneration schemes. Despite the potential importance of waste policy in relation to climate protection, through the potential for reducing methane emissions from landfill through reduction, reuse, recycling and composting policies, waste was not volunteered as an area in which the municipality was taking action in any of the case studies. Nonetheless, shifts in waste management policy have taken place at the national level, and the introduction of performance targets for recycling and composting, has begun to shift the nature of waste management locally towards options which will have a reduced impact on climate change.

5.4 The municipality as enabler

In their role as enablers, local authorities act as consultants, advisors and promoters of climate protection policies and measures with the public, businesses, and other organisations. In Leicester, the Energy Management Group, the Energy Agency and the Energy Advice Centre have all been involved with various schemes aimed at promoting awareness about the use of energy and its impacts. Initiatives include: the Energy Education project, which involves the use of an Electric Energy Advice bus touring local schools; the use of the solar panels from the Big Brother TV programme at a local school; promoting the installation of energy efficient home improvements through recommending installers; work with Small and Medium sized Enterprises; and the energy efficiency centre shop. In Southampton, and Kirklees, Energy Advice Centres also run a number of education campaigns and projects with the public and with local businesses. In Southampton, the Green Transport Plan Working Group was established in 1999 to encourage businesses in the city to develop more sustainable travel options and

currently 46 are taking part in the Working Group. Leicester also provides advice and promotes energy efficiency to other organisations, such as the Leicester Regeneration Company, and to other local authorities, through the development of best practice case studies for the Department of Trade and Industry, as well as through projects such as Enthuse, funded through ALTENER, and SiREN, which aim to assist local authorities in identifying the potential and barriers to the development of renewable energy. Together with Newark and Sherwood Energy Agency, the Leicester Energy Agency has developed the East Midlands Community Renewables Initiative, co-ordinated by the Countryside Agency, to promote the development of renewable energy in the region.

In Germany, consultancy and promotion involve, for example, the dissemination of information and experience gained in the context of municipal pilot projects to private consumers as well as to business. German municipalities are very active in the promotion of energy savings for private households as well as for stakeholders such as from trade, industry, or the building industry. In many German cities energy forums *(Energie-Tische)* (Fischer and Hänisch 1996; Fischer 1998; Fischer et al. 1999),[42] and energy committees *(Energie-Beiraete)* have been established. The *Frankfurt* 'Benchmarking-Pool' project aims to achieve energy savings in private office buildings, which are systematically compared with similar buildings. On this basis, different options for energy savings are developed. The 'Benchmarking-Pool' has become successful as its energy management concepts have been adopted in numerous other municipalities. The measures are particularly successful when they can combine the reduction of costs with the reduction of CO_2 emissions. These effects can be greatly enhanced through the targeted promotion of certain measures by means of financial subsidies aiming mainly at home owners but also at businesses. Such subsidy programmes exist in many municipalities, e.g. the Heidelberg programme for the promotion of *Rationelle Energieverwendung* (Rational Energy Use) and Munich's *Erweitertes Klimaschutzprogramm* (Extended Climate Protection Programme). These programmes involve not only financial subsidies, but also incorporate other support measures for example the provision of roof space for solar energy panels. The Munich programme has shown that in this way significant effects can be achieved at a relatively low cost.

42 The establishment of energy forums ('Energie-Tische') in more than 20 German cities, among them Heidelberg and Frankfurt am Main, was part of a national CO_2 reduction campaign for local authorities and consumers which started 1995.

5.5 Summary

In both countries, activities for climate protection are frequently concentrated on the role the municipality plays as a consumer and role model. In the UK indicators (BVPI) and certification systems (EMAS) play a stronger role in shaping such activities than in Germany, where financial arrangements and incentives are important. What is most striking is that in Germany a variety of new tools are being tested to mobilise private capital. Subsidies are given, but must be matched by private funds. For renewable energies a premium has to be paid which is then invested in new installations. Contracting with private investors has become very popular. Pilot and demonstration projects — frequently funded by the EU — have become very popular in both countries. The supplier/service provider role has traditionally been stronger in Germany than in the UK, although this is changing rapidly, and in the UK the role of planning appears to be more influential. However, in both countries it is clear that it is the *enabling* role through which local government is most able to influence the activities of others. There seems to be a shift in the modes of governance in both countries, so that municipalities prefer strategies which are mainly based on the role as consumer/role model and as enabler. The enabling role has become crucial. Even if the municipality is engaged in innovative initiatives regarding their own buildings this will result only in minor CO_2 reductions. In order to develop effective local climate protection policies, the majority of actions have to be based on strategies to involve stakeholders and the general public, to mobilise private capital and to work with other government partners in order to attain funding and implement innovative projects.

6. Municipal capacity for climate change policy: four challenges

Despite the many initiatives which are taking place within local authorities in Germany and the UK to address climate change, significant barriers have been encountered. In the main, these are reflective of the voluntary nature of many climate protection initiatives, and the ways in which those initiatives that are based on mandates from central/state government come into conflict with other national and local priorities. Four key areas in which challenges have been encountered are: (1) the availability of financial resources; (2) the support and acceptance of climate change policies by the political members, administrative officers and the wider public; (3) the extent of policy integration at a local, regional and national level; and (4) the extent to which local authorities in their enabling role can influence other key actors to take action. Here, we discuss each in turn.

6.1 Financial resources

Given the voluntary nature of many climate protection activities at the local level, finding adequate and reliable funding sources can be critical to the success or failure of projects and, in turn, climate protection strategies and goals. There are two sources of such additional funds — internal and external. In Leicester, the close monitoring of energy and water consumption data has led to financial savings through querying incorrect bills, as well as through the implementation of low-cost efficiency measures. In Kirklees, an innovative funding mechanism has been established in the form of the Energy and Water Conservation Fund which provides loans for energy efficiency measures, which are then paid back through the financial savings accrued. The local authority has also joined the UK Emissions Trading Scheme, the only one to do so in the UK, through which financial benefits from achieving reductions in emissions are available. In terms of external funding, Leicester and Kirklees have attracted a wide range of EU funding for projects, and funding through UK bodies such as the Carbon Trust,[43] the EST and various regeneration initiatives. In part, this funding has been routed through the Energy Agencies, and in Southampton the Energy Agency has also gained funding for initiatives. However, the lack of additional funding in Southampton is reflected in the fact that most of the initiatives dealing with climate protection relate to the existing Geothermal/CHP district heating and cooling scheme, to policies which are mandated by central government (e.g. Local Plan, Local Transport Plan), or to measures to reduce energy and water consumption in the Council

The losses suffered by German municipalities in the area of business taxes, their high levels of debt and the structural budgetary crises in the public administration make it unlikely that more resources will be made available for climate protection as a voluntary task in the future. Not only does climate change as a voluntary task take a back seat to other mandatory tasks, it is often not even given priority among other voluntary tasks. Due to the bleak financial situation that currently prevails in the German municipalities, the far from unrealistic scenario of municipalities having to decide between the maintenance and operation of a swimming pool, the provision of cultural services and climate protection could

43 The Carbon Trust is an independent company funded by the British government through the revenues from the Climate Change Levy. Its mission is to help business and the public sector to reduce carbon emissions and capture the commercial potential of low carbon technologies; for further information see <http://www.thecarbontrust.co.uk>.

well arise. Although all three German municipalities studied are relatively rich,[44] the financial constraints are noticeable even here. Traditionally each managed its own subsidy programmes, but were forced, like Munich, to cut them back. Measures such as contracting have emerged as a suitable means of obtaining the missing investment resources in all three case studies. Thus, the municipalities have adopted two strategies: first, they try to link measures for the reduction of CO_2 emissions with a reduction in spending which, against the background of rising energy prices and tax, is of equal interest to the municipalities themselves and the relevant third parties. This involves frequent attempts to associate the money saved with a specific purpose or to set up a corresponding fund. Additional funds have been created by the *Stadtwerke,* at least in Heidelberg and in Munich, from the premium charged for electricity from renewable sources. Second, all three local governments are increasingly engaging in attempts to secure funding in addition to their municipal budgets, either through EU projects or the financial support of private co-operation partners. This ensures not only the implementation of measures which have already been agreed — even in financial crisis situations — but also increases their independence when it comes to the planning of new projects. In these respects — i.e. seeking additional funding through dedicated internal streams and increasing reliance on external sources of funding — the financial context of local climate protection in Germany is becoming more like that of the UK.

6.2 Acceptance and support for climate change policy

Aside from financial resources, support for climate protection policies and measures from within the administration and elected members as well as the wider community is important in shaping local capacity to act. Within the administration, policy entrepreneurs[45] or champions are particularly important. In Southampton,

44 The financial situation in most German municipalities is worse than in Frankfurt am Main, Munich, or Heidelberg. Finding the financial resources for undertaking voluntary action in the field of climate protection is a significant problem as most German local governments must manage their resources in accordance with a budget-balancing concept *(Haushaltssicherungskonzept).* Under the conditions of a budget-balancing concept or provisional financial management *(Vorlaeufige Haushaltsfuehrung),* municipalities no longer have the freedom to decide whether certain voluntary tasks should be pursued. The *Selbstverwaltungsgarantie* (guarantee of self-government) enshrined in the German Basic Law is being increasingly eroded.

45 A Policy entrepreneur "can be found in any one location in the policy community … their defining characteristics … is their willingness to invest their resources — time, energy, reputation, and sometimes money — in the hope of a future return. … in the form of policies of which they

the role of the Director was seen to be significant, in Kirklees, it was a past leader of the council responsible for establishing the environment unit who was seen to be a key actor, while in Leicester the head of the energy management group acts both as a policy entrepreneur and as a champion for certain sorts of approaches and technologies. While such individuals are clearly important in shaping the capacity to act on climate protection, they can have negative affects by too closely circumscribing climate protection to a particular pet project or vision (e.g. CHP). Without such entrepreneurs who are willing to take risks, implementing policies and measures in a new area like climate protection can be hard going. Nonetheless, policy entrepreneurs and champions have to work within the constraints of the administrative structures and timetables. However, where significant local capacity is created for action on climate protection, the importance of the political time-scales of the administration appears to become less important, and the priorities and policies surrounding the issue are able to survive the loss of certain individuals.

In particular, having high-level support was found to be important in the German case studies. The greater the support that exists for climate protection among a city's political leadership, the more rapidly it becomes established as a key objective in all of the administration's activities. Recently, however, there has been a general decline in interest in climate protection. In all three case studies, the institutionalisation of climate protection was initiated by red-green majorities, and climate change policy has been supported in all three municipalities by policy entrepreneurs at the highest political level or at least within the administration. In Heidelberg, the issue has been pushed by the lady mayor[46] and the head of the Directorate for Environment and Energy. In Munich the Head of the Directorate of the Environment, who became after a major reorganisation head of the new Directorate of Health and Environment, has been a driving force from the outset. In Frankfurt am Main, the situation became difficult when the city elected a conservative lady mayor and climate protection policy lost its support at the highest political level and in the city council. However, the decline in interest in climate protection is not limited to political and administrative circles, it can also be observed among the general public. Broad support from the population and the

approve, satisfaction from participation, or even personal aggrandizement in the form of job security or career promotion" (Kingdon 1995: 122).

46 She is a former member of the European Parliament and chaired its Environmental Committee.

direct participation of the population in transparent processes, e.g. in the context of Local Agenda 21, are, however, essential for the long-term success of climate protection policy.

Public support is also important in the UK. In Southampton, political support from a previous leader of the council led to the establishment of the Southampton Sustainability Forum, which in turn has provided a means through which the wider community can be involved in both consulting on policy development and undertaking schemes which have some potential climate protection benefit. In Leicester, stakeholders have been engaged in the process of drawing up the current climate change strategy, as well as with a host of different initiatives, in turn giving ownership of climate protection issues to a wider community outside the council. However, in neither Leicester nor Southampton have the general public played a central role in the development or delivery of policy for climate protection.

6.3 Administrative and policy integration

The institutionalisation of climate protection policy locally both reflects and influences the extent of administrative and policy integration on this issue. In Southampton, the position of climate change policy within the Planning and Sustainability Division means that there has been a fair degree of integration of climate change concerns in the development of Local Plans (SCC 2004)[47]. Equally, transport planning is considered an area in which the council can contribute to climate protection, for example through the development of green travel plans. In contrast, there is perhaps less communication and collaboration with issues of housing, despite the common interest in issues of domestic energy efficiency, and here it is clear that traditional divisions between different parts of the local authority remain. In Leicester, there is more evidence of administrative and policy integration at the local level, through, for example, the development of the Climate Change Strategy, and in Kirklees, climate protection policy and measures have been developed in the context of LA21, housing, planning and purchasing policies. However, in all cases at the project level there is less evidence of integration, with

47 In the UK, development plans are currently organised at two levels: structure plans are prepared by unitary authorities or county councils and provide the strategic framework for land-use planning; local plans are prepared by city or district councils and provide the detailed guidance for development (Rydin 1998: 208). Although Southampton is a unitary authority, it undertakes the development of structure plans with Hampshire and Portsmouth councils, and also prepares its own local plan. These arrangements will be changed in the light of current reforms to the planning system.

one agency or department being primarily responsible for projects which usually address one dimension of climate protection, e.g. housing or renewables. This is not surprising given the segmented way in which project calls are devised and implemented, and the small scale and low-level of investment in most such schemes.

Issues of integration are important because the long-term implementation of climate policy objectives requires the co-ordination or centralisation of competencies within the administration so that goals and strategies can be realised, and concrete climate protection measures can be implemented. The reorganisation of the administration in Heidelberg is an example. As part of this process, it was possible to centralise the municipality's control of its own energy consumption within the department that is also responsible for climate protection. In Germany, research findings suggest that in order to overcome resistance and inertia within the administration, it is necessary to establish a department within the administration that focuses on climate protection and can try to put the issue back on the political agenda, both within and outside the administration. The situation in all three German case studies illustrates that policy integration between the energy and transport sectors is an important prerequisite for the long-term success of municipal climate protection. While in the UK such links arise by chance from time to time, the German cases show that even pioneering local governments can fail to integrate climate change into the transport sector which seems to be difficult to regulate. Activities are restricted to smaller projects in all three cases while major projects do not exist. The links between the energy and the transport sectors are few and far between. While Energy Commissioners have been appointed in many German municipalities actual policy integration has been inadequate, so that even in pioneering local governments the measures implemented have been concentrated on the energy sector and little or nothing has changed in the area of transport. The main reason for the diverging development in the two most important sectors of climate change policy seems to be the different problem structure. In energy policy it is relatively easy to save funds and, therefore, gain the support of the relevant actors. For policy entrepreneurs it is certainly easier to succeed in the area of energy policy than in relation to transport.

6.4 The enabling capacity of local authorities

Given that, outside their own operations, the predominant means through which local authorities are acting to promote climate protection is in an 'enabling' role,

the ways in which this capacity — to steer or influence other actors who in turn implement policies and measures with climate protection benefits — is shaped are critical. In Leicester, the need to work in partnership with other local actors to achieve policy goals is evident both in the development of the Climate Change Strategy and in particular initiatives. For example, in creating the Leicester Better Building standard, the approach involved persuading housing developers that this would provide a 'win win' approach for them, and 'hand holding' through the process of developing new approaches to building design. Here, it is clear that enabling capacity is not only a question of 'getting people together' but providing incentives (and in particular the provision of financing for new schemes), co-ordination across different policy spheres, and taking some policy risks, which are shaped by the factors discussed above. Whether or not a local authority can undertake this role successfully appears to have significant implications for the level of activity in the arena of climate protection. In Southampton, the local authority does not appear to have undertaken significant action on climate protection in an enabling role, and hence the number of initiatives and schemes are low and the development of climate protection policy has focused on in-house energy efficiency, with the exception of the CHP/Geothermal district heating scheme where considerable innovation and partnership working is evident. In Leicester and Kirklees, in contrast, the local authority has been active in its different guises, and in particular as an enabler of local climate protection policy, with the impact of creating a virtuous circle of political support and financial resources. Nonetheless, the very fact that it is in the role of enabler that Leicester and Kirklees have been most successful points to the difficulties encountered even in leading local authorities in taking a regulatory or planning role with respect to climate protection, a situation which is created because of the non-statutory nature of local climate protection in the UK and the competing priorities from other sectors and among different interest groups.

In Germany, the liberalisation of local services by the EU means that the municipalities are losing opportunities to exert a *direct* influence as they no longer have direct access to the energy supplier or transport companies. While hitherto the municipalities were able to transfer responsibility for climate protection activities to the local authority companies (municipal works, transport companies), they are now more strongly challenged in terms of co-ordination and co-operation with external suppliers. In this regard, German local authorities are confronted with the situation which has been the reality of UK local climate protection policy over the

past decade. In Germany, governance modes in the area of climate change have been changing towards enabling. On the one hand, local authorities have to deal with a financial crisis and, therefore, try to mobilise private contractors. On the other hand, the Climate Protection Commissioners have succeeded in co-operating directly with third parties. Here enabling third parties to address climate protection is central. This can be accomplished through the provision of advisory services, but can also be combined with financial incentives. Thus, funds for private home-owners, business companies, etc. to improve energy efficiency, support renewable energy, etc. have to be established. Thus, local authorities try to regain at least parts of steering capacities they have lost by adapting to the new framework conditions. The crucial question here is how the municipalities can develop the competencies necessary for these activities, e.g. consultancy competencies in the liberalised markets. Emerging forms of contracting and Public Private Partnerships, which have arisen in response to this situation, are a rather new phenomenon in local climate protection, and their long-term success and sustainability has yet to be established.

6.5 Summary

The four challenges outlined above, which the municipalities in both countries face, seem to reinforce each other. Additional financial resources can be won as a result of political support or the institutionalisation of climate change within mainstream policy making, in turn creating enhanced capacity to steer other actors towards the goals and aims of local climate protection policy. However, limited finances, a marginal position within the local authority and a lack of political support can reduce the ability for municipalities to locally address climate protection. Our case studies illustrate the various innovative means through which leading local governments are trying to ensure a 'virtuous' circle for climate protection — seeking additional funds, co-operating with other departments, and enrolling actors with a high level of political kudos. However, it is evident that meeting these challenges is no easy task even in these pioneering municipalities, with the implication that in other municipalities climate protection policy and action is even more marginal. To date, the implications of such findings for the achievement of national policy targets and international agreements is not known. However, given the importance assigned in national strategies to addressing emissions from the energy and transport sectors, and to the significant role of local government in particular, these findings do not bode well for the long-term future of climate protection policy in the UK and Germany.

7. Conclusion

Despite considerable differences in the legal competencies and the administrative structures of local government in Germany and the UK, our research indicates that in relation to local climate protection policy there are more similarities than differences both in terms of the sectors in which action is being undertaken, the measures implemented, and the roles which the municipality is adopting. First, the challenges in addressing greenhouse gas emissions from the transport and planning sectors have meant that in both countries attention has focused on the energy sector as the primary arena for local policy and local action. While commendable policies and measures have been developed and implemented in this arena, in order to be successful in reducing emissions of greenhouse gases, local climate policy will need to develop to tackle the 'harder to reach' areas of transport, planning, and, in the case of the UK, waste. Second, we suggest that the role taken by local government in Germany with respect to climate protection is becoming more 'enabling', and hence like the UK. Two factors have fostered the shift in the nature of local climate protection policy in Germany: (a) the decreasing and inadequate financial resources of the German municipalities, which have in effect reduced their constitutionally guaranteed autonomy considerably; and (b) the impacts of increasing European integration, mainly in relation to the liberalisation of the energy and transport markets which has changed the German situation with respect to service provision. The convergence we have documented between the UK and Germany is not only caused by shifts within German local government, but is also apparent as UK local authorities have the potential to both gain more autonomy (through the power of 'well being', and through seeking European funding), and are mandated to take climate and energy policy more seriously at the local level, for example through planning guidance, local transport policy guidance, statutory targets for waste recycling and reuse, BVPI, funding for CHP schemes, and so on.

However, some differences remain, which are related to the differences in central-local relations in each country. In the UK central mandates (e.g. reporting requirements, policy guidance) play a more prominent role in shaping local climate protection policy, while the difficult financial situation in Germany has led to a variety of initiatives to mobilise private capital, which in turn are guiding local climate protection policy development. Even these differences may disappear over time. In Germany, whether climate change policy should become mandatory at the local level is currently being debated. In this case, the states would have to pay for

this task and it is probable that central direction would become more important. In the UK, the strategies developed in Germany to overcome the severe financial restrictions might fit very well into existing enabling strategies, as is evident from the use of the Private Finance Initiative to fund some community renewable and waste recycling schemes. Our research supports the contention that climate change policy differs from traditional environmental policy, as a regulative approach cannot be easily applied. As such, it provides ample opportunities to experiment with new modes of governance, especially with different forms of contracting and public private partnerships. If central governments, and other actors such as transnational municipal networks, are to be successful in increasing local government capacity for climate protection these are the issues which they need to address. It can be argued that the convergence of the framework conditions of local governance in the UK and Germany improves the basis for policy learning and policy transfer between municipalities. Our findings suggest that there may be lessons to be learnt in German local authorities from their UK counterparts as to how to address the changing governance context and undertake the 'enabling' role more effectively. Given this, transnational municipal networks might be significant for sharing ideas and experience across Europe, and in developing a 'new political space' for climate protection and additional capacity for local government action.

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Table 1: Roles of the municipality in local climate change policy

	Consumer and Model	Planner and Regulator	Supplier and Service Provider	Enabler
Energy	Energy efficiency schemes within municipal buildings (e.g. schools) Use of CHP within municipal buildings Purchasing green energy Procurement of energy efficient appliances Eco-house demonstration projects Renewable energy demonstration projects *(Internal) Contracting (Germany)* *HECA Report (UK)*	Strategic planning to enhance energy conservation Supplementary planning guidance on energy efficiency design Supplementary planning guidance on CHP installations or renewables *Supplementary (private) contracts to guarantee connection to CHP or renewable energy installations (Germany)*	Energy efficiency measures in council housing *Energy Service Provider* (Stadtwerke) (Germany)* *Energy Service Companies (UK)* *Community energy projects (UK)*	Campaigns for energy efficiency Provision of advice on energy efficiency to businesses and citizens Provision of grants for energy efficiency measures Promote the use of renewable energy Loan schemes for PV technology *HECA report (UK)*
Transport	Green travel plans Mobility management for employees Green fleets	Reducing the need to travel through planning policies Pedestrianisation Provision of infrastructure for alternative forms of transport *Workplace levies and road-user charging (UK)*	*Public Transport Service Provider* (Verkehrsbetriebe) (Germany)*	Education campaigns on alternatives Green Travel Plans Safer Routes to School Walking Buses Quality partnerships with public transport providers
Planning	High energy efficiency standards in new buildings Use of CHP and renewables in new council buildings Demonstration projects — house or neighbourhood scale.	Strategic planning to enhance energy conservation Supplementary planning guidance on energy efficiency design Supplementary planning guidance on CHP installations or renewables *Supplementary (private) contracts to guarantee connection to CHP or renewable energy installations (Germany)*		Guidance for architects and developers on energy efficiency Guidance for architects and developers on renewables
Waste	Waste prevention, recycling and reuse within the local authority Procurement of recycled goods	Provision of sites for recycling, composting and 'waste to energy' facilities Enable methane combustion from landfill sites	Recycling, composting, re-use schemes *Service Provider (Stadtwerke) (Germany)*	Campaigns for reducing, reusing, recycling waste Promote use of recycled products

**Note: As discussed in the text this role is diminishing due to liberalisation and privatisation*